

# Central Valley Flood Protection Board Update

**May 20, 2016**

Presented by:

Christopher Williams, PE

Department of Water Resources

Central Valley Flood Planning Office

[Christopher.Williams@water.ca.gov](mailto:Christopher.Williams@water.ca.gov)



# What is OMRR&R?

## OPERATIONS, MAINTENANCE, REPAIR, REHABILITATION, AND REPLACEMENT



**Operations:** labor, facilities, inspections, emergency response activities



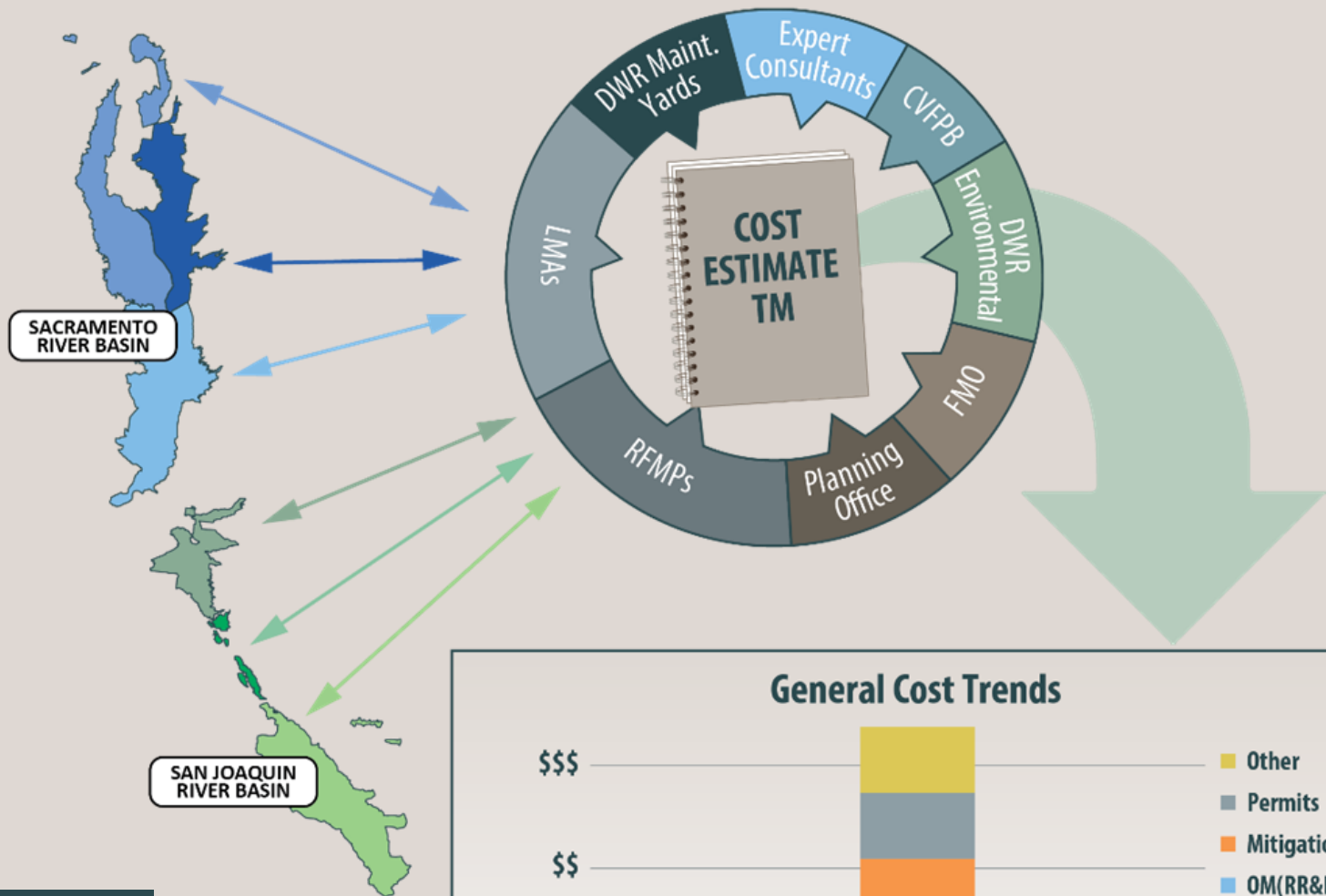
**Maintenance:** routine vegetation management, rodent control, sediment removal, mechanical service



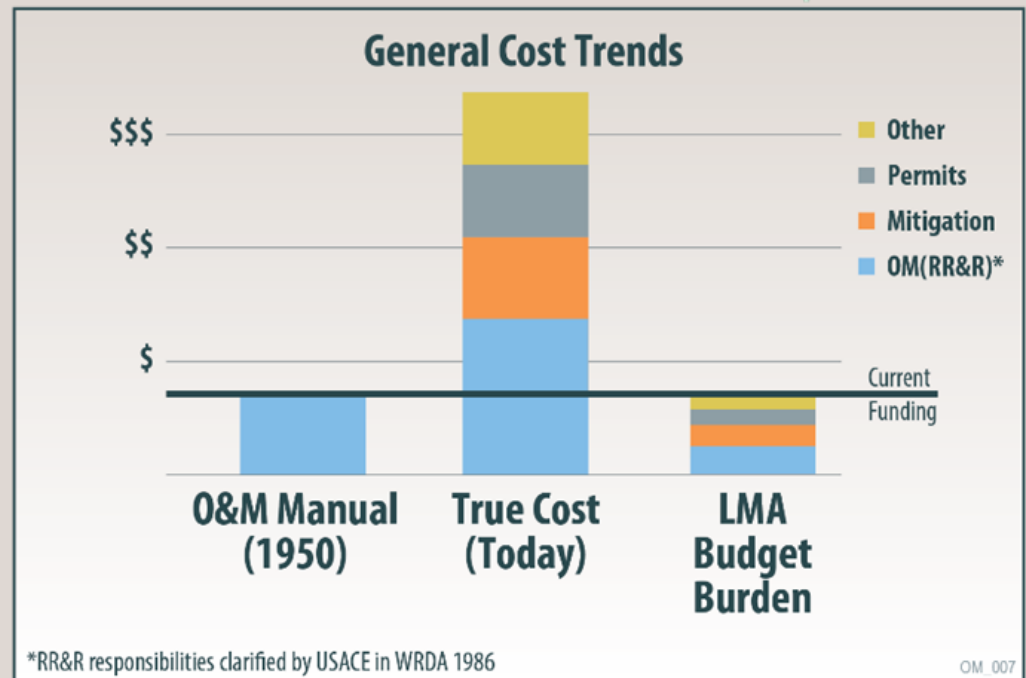
**Repair and Rehabilitation:** minor and major repairs



**Replacement:** end of life or catastrophic failure



Bottom-up  
approach  
reveals  
“true cost”



# The Challenge

## How things were...

## How things are now...

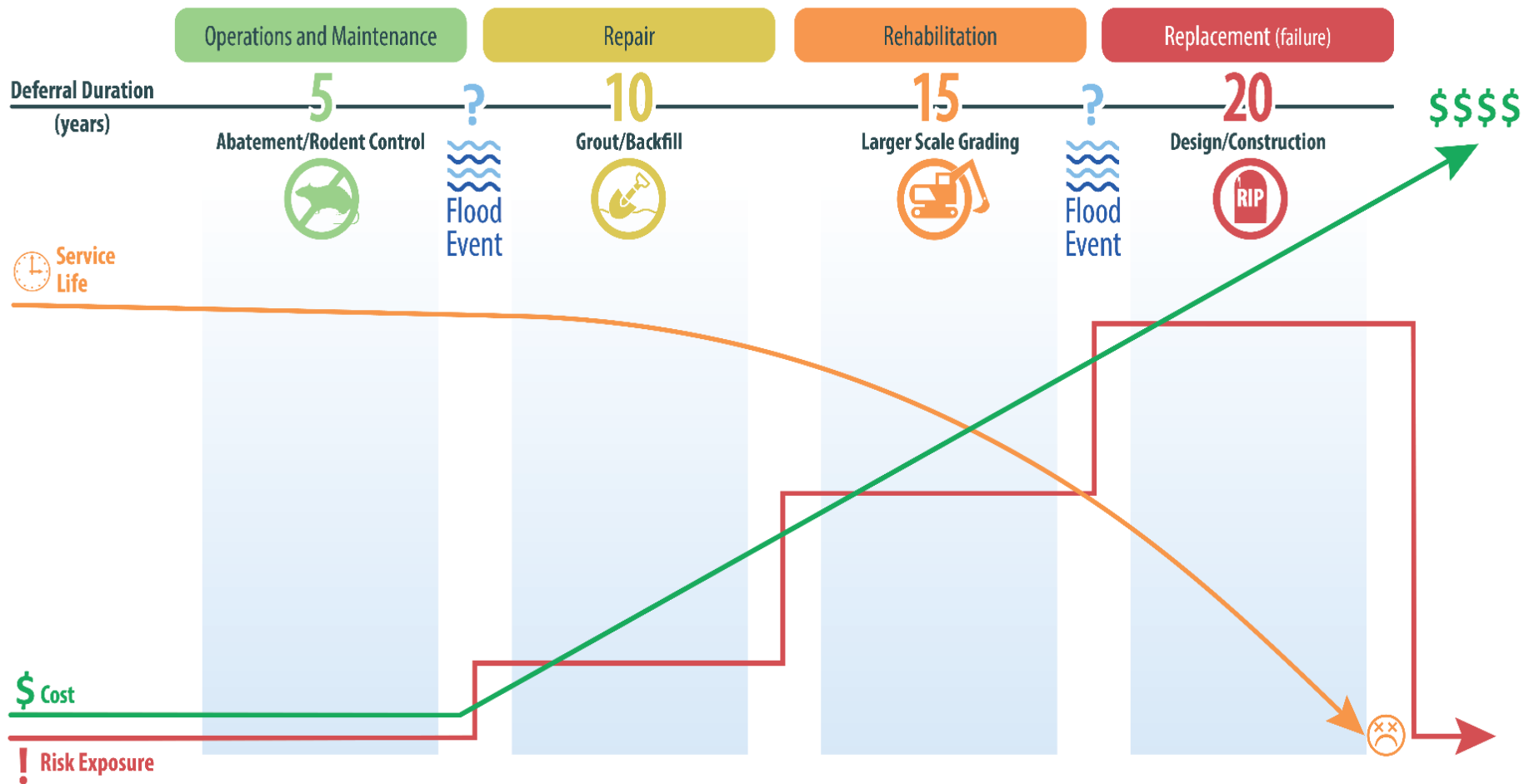


# From Single Purpose



# To Multi-Benefit

# Quick Example - Rodent Control



# Fundamental Supporting Goal

CVFPP GOALS	INTENDED OUTCOMES
<b>Primary Goal: Improve flood risk management</b>	
Reduce the chance of flooding	  
Reduce damages once flooding occurs	
Improve public safety, preparedness, and emergency response	
<b>Supporting Goals</b>	
<b>Improve Operations and Maintenance</b>	  
Promote Ecosystem Functions	   
Promote Multi-benefit Projects	   
Improve Institutional Support	   

# What you will find in the OMRR&R TM

## Chapters

- 1- Background
- 2- Factors and Challenges Influencing the Costs
- 3- Current OMRR&R Practices
- 4- Our Approach
- 5- Regional OMRR&R Cost Tables
- 6- Potential Funding Sources
- 7- Recommendations
- Appendices- Issue Summaries

# Key Issue Summaries

1. Existing Conditions and the 1955/1957 Design Profiles
2. Environmental Compliance and Other Transactional Costs
3. Comparison of Setback and Rebuild-in-Place Levee Maintenance Costs
4. Prioritizing and Addressing the Cost of Inspection Compliance
5. Cost of Addressing Levee Pipe Penetrations in State Plan of Flood Control
6. Vegetation Management: Cost of Maintaining Channel Capacity
7. Cost of Sediment Removal in the State Plan of Flood Control
8. Three Amigos Nonstructural Alternative Project at the San Joaquin River National Wildlife Refuge
9. District Governance: Consolidation Opportunities and Challenges
10. Lessons Learned from Hurricane Katrina – Redesigning Cities
11. Lessons Learned from Hurricane Katrina – Spreading the Cost



# Findings by the Numbers

**\$130M**

**What we *should* be spending annually**

**\$30M**

**What we *are* spending annually**

## Other Numbers and Cost Examples

\$40K-\$60K.... O&M on 1 Mile of Levee

\$10 ..... Removal of 1 Cubic Yard of Sediment

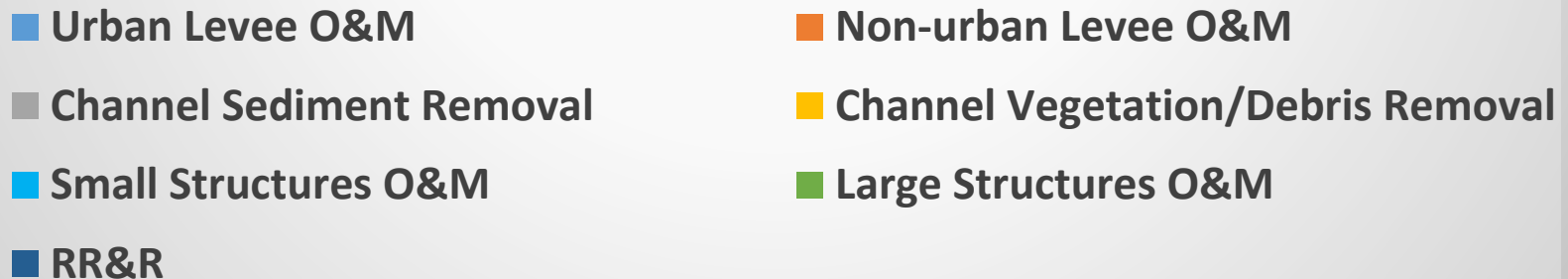
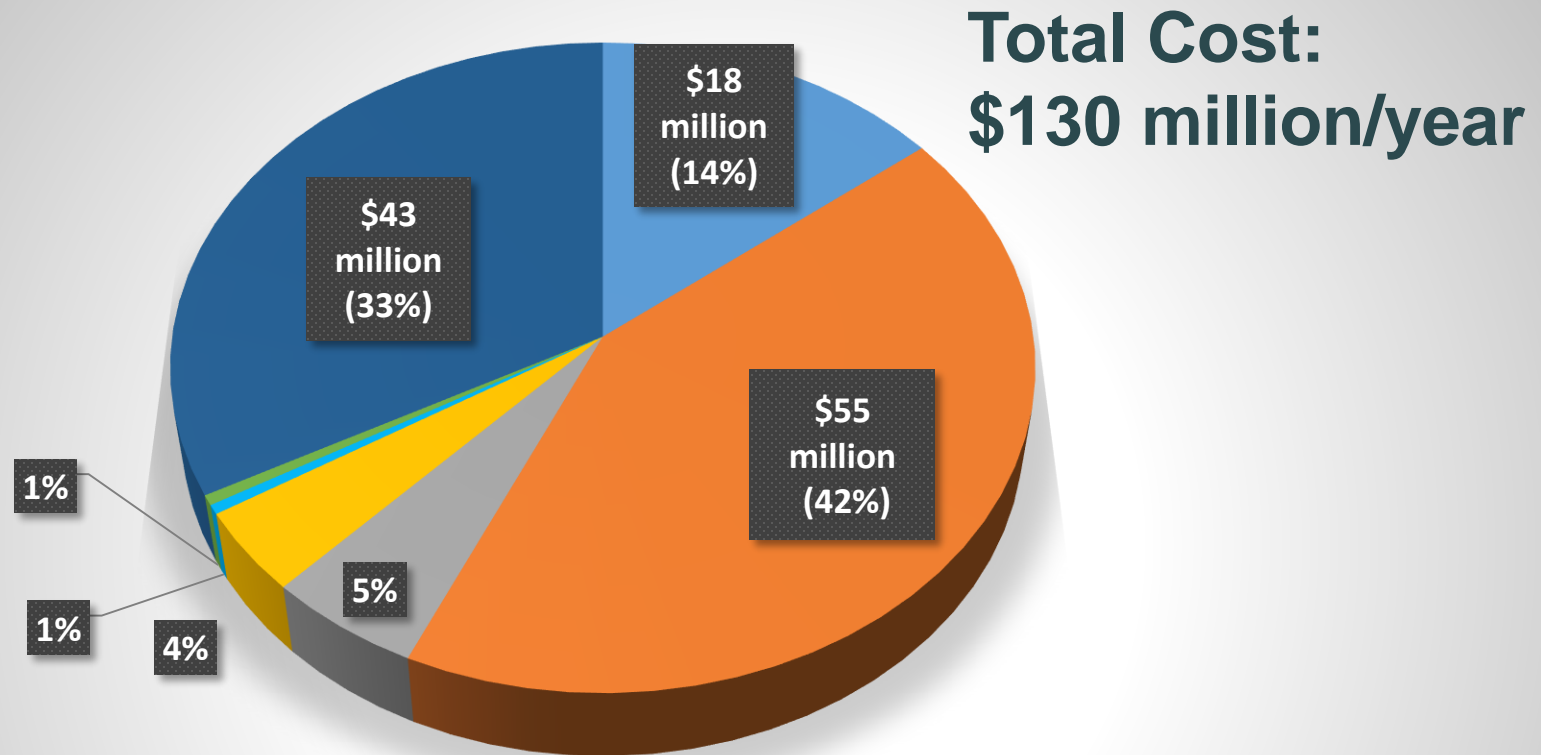
\$25K..... Removal of 1 Acre of Arundo

1,500..... Number of Pipe Penetrations (LMA responsibility)

\$2K ..... Each Video Pipe Inspection

\$240K ..... Pipe Replacement (lower \$ for abandon/removal/slip-lined)

# Anticipated Proportion of Needed Annual Cost



# OMRR&R Workgroup Recommendations

## **More \$**

- Establish adequate and reliable OMRR&R funding

## **Fix What's There Now**

- Catch up on deferred maintenance and address legacy system deficiencies

## **Increase Efficiency**

- Explore, resolve, and implement strategies to streamline permitting (regional, programmatic, etc.)

## **Increase Awareness**

- Create better governance and a tracking system of OMRR&R activities and spending to provide additional transparency about the value of investment

# Questions?

“The structures and facilities constructed by the United States for local flood protection shall be continuously maintained in such a manner and operated at such times and for such periods as may be necessary to obtain the maximum benefits.”

– 1955 SRFCP Standard O&M Manual



# Central Valley Flood Protection Board Update

**May 20, 2016**

Presented by:

Christopher Williams, PE

Department of Water Resources

Central Valley Flood Planning Office

[Christopher.Williams@water.ca.gov](mailto:Christopher.Williams@water.ca.gov)

